



THE DAYTON SECTION

Fostering scientific education and research and promoting public understanding of science

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<http://DaytonACS.org>

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BULLETIN**Election Edition 2007****Meetings and Events**

- Oct. 27/Nov. 3-4: National Chemistry Week Activities
November 2: Joint Meeting with Wright-State University
November 8: Professional Practices Meeting

Section News and Other Stuff

- Candidates for Chair-Elect, Secretary, Councilor, and Alternate Councilor All Run Unopposed.
 - Candidate Biographies and Statements – pages 8-9
 - Ballot enclosed – see inserts.
- ChemLuminaries: The Dayton Section gets screwed **AGAIN!** - page 5
- Past Meetings – page 4
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- Report from Council – page 6
- Alzheimer's Avoidance Therapy – pages 7 & 10
- Su Doku for Chemists – page 10

DATE MATERIAL - MEETING ANNOUNCEMENT - DO NOT DELAY

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American Chemical Society
Dayton Section
Eugene M. Kettering Center
140 East Monument Avenue
Dayton, OH 45402-1267

NATIONAL CHEMISTRY WEEK

The Many Faces of Chemistry

This year, on the 20th anniversary of NCW, we will host two events:

EVENT #1:

DATE: Saturday, October 27th

TIME: 10:00 AM – 4:00 PM

VENUE: Centerville Library 111 W. Spring Valley Road, Centerville

COST: This Event is Free!

EVENT #2:

DATE: Saturday and Sunday, November 3rd and 4th

TIME: 12:00 PM – 4:00 PM (both days)

PLACE: Boonshoft Museum of Discovery 2600 DeWeese Parkway, Dayton (See www.boonshoftmuseum.org for directions)

COST: Admission to Museum: \$7 per child (ages 2 – 12, free under 2), \$8.50 adults, and \$7 seniors



Come celebrate National Chemistry Week with us at the Centerville Library or the Boonshoft Museum of Discovery, where we will highlight this year's theme "The Many Faces of Chemistry." If you were to draw a picture of a chemist, what would that person look like? Perhaps he would be wearing a lab coat and safety goggles; perhaps she would be holding a test tube; maybe he'd be logged on to a supercomputer! But people who work in laboratories are not the only ones who use chemistry every day in their jobs. Come explore how different types of chemists use their scientific knowledge. Please see <http://www.chemistry.org/ncw> for more information on this year's theme.

We are also looking for volunteers to help the section with either event for the day. If you are interested in helping out, please call Joy Rogers at (937) 255-9718 or e-mail Joy.Rogers@wpafb.af.mil.

PROFESSIONAL PRACTICES MEETING

DATE: Thursday, November 8th

TIME: 6:30 PM

PLACE: Wellington Grill, 2450 Dayton Xenia Rd., Beavercreek, (937) 426-4600

It has become the tradition of the Dayton Section at the Professional Practices Meeting to honor those members, who, during the past year, have attained 50 years of membership in the ACS. This year ACS notified us that we have only one new 50-year member — Theodore Maierson — but we have four 60-year members: Freeman F. Bentley, Charles A. Dille, Violet R. Strahler and Fred P. Willaims. These members will be afforded the opportunity to tell us about his or her career in chemistry. However, the honorees will be allowed to remain silent, if desired! In addition to the 50-year honorees, all members with more than 50 years of ACS membership are invited as guests of the Dayton Section. Of course, all other members of the Dayton Section are welcome, as well. Please join your fellow members of the Dayton Section and learn what is in store for 2008.

Reservations:

Please contact Venkat by November 5th at (937) 255-9117 or at narayanan.venkat@wpafb.af.mil.

UPCOMING MEETING

NOVEMBER

JOINT MEETING WITH WRIGHT STATE UNIVERSITY

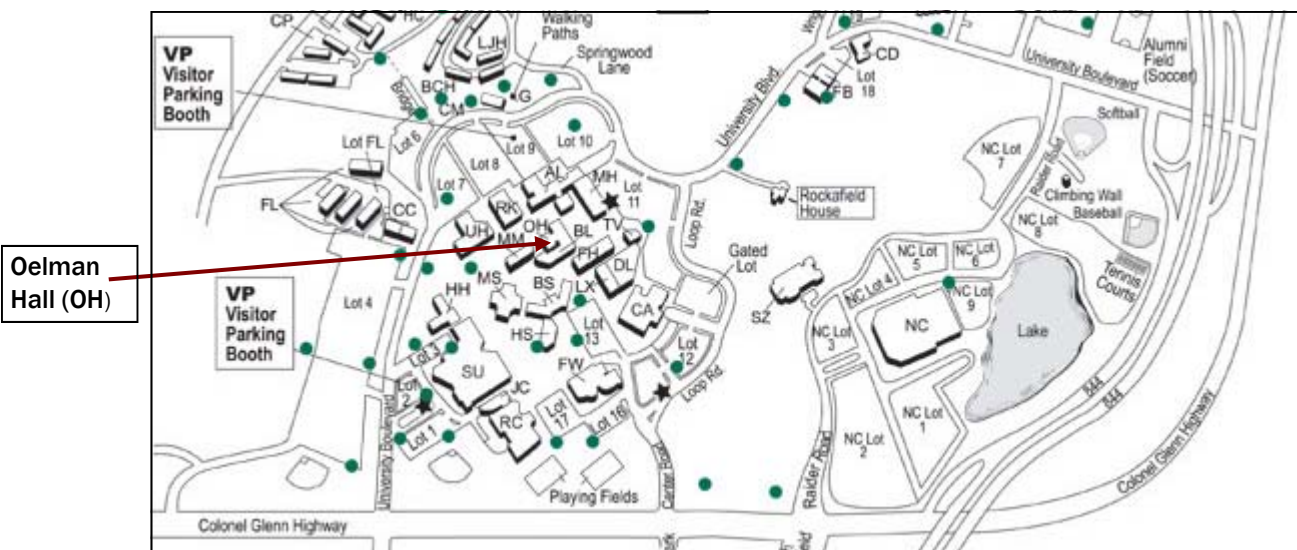
DATE: Friday, November 2nd
PLACE: Room 340, Oelman Hall, WSU
TIME: 3:30 PM
SPEAKER: Professor Frank W. Harris, Maurice Morton Institute and Department of Polymer Science, University of Akron
TITLE: "Polymers in Liquid Crystal Displays"

Abstract

Polyimides have been prepared for use in liquid crystal displays (LCDs) and in optical communication systems. All of the polymers contain 2,2'-disubstituted biphenyl structures, which have been used to increase solubility in organic solvents, decrease color, and to aid in the manipulation of thin film optical properties. More specifically, this approach has been used to develop compensation films that are used commercially on avionic displays and on large screen LCD TVs where they improve the off angle viewability. Films have also been developed that are used commercially as optical rotators in planar lightwave circuits (PLCs) where their role is to compensate for the birefringence in the PLC materials and, thus, reduce light loss. For example, for the optical rotator applications, mesogenic groups, i.e., 4-cyanobiphenyl, were first attached to 4,4'-diaminobiphenyls in the 2- and 2'-positions via flexible alkylene spacer groups. The length of the spacer group was varied from 6 to 11 methylene units. The diamines were then polymerized with aromatic dianhydrides in refluxing m-cresol to generate the polyimides. The polyimides, which were soluble in a wide variety of organic solvents, were solution cast into thin films. Half waveplates were formed by uniaxially drawing (stretching) the films at elevated temperatures to elongations of 100 to 200%. The drawing process was carried out in such a way that the film in-plane refractive index in the draw direction (n_x) was larger than the in-plane refractive index perpendicular to the draw direction (n_y), which was larger than the out-of-plane refractive index (n_z), i.e. $n_x > n_y > n_z$.

About the Speaker:

Professor Harris is Distinguished Professor of Polymer Science & Biomedical Engineering at the University of Akron. He obtained his B.S. in Chemistry at the University of Missouri in 1964, his M.S. in Chemistry at the University of Iowa in 1966, and his Ph.D. in Chemistry at the University of Iowa in 1968. He joined the WSU Chemistry Department as an Assistant Professor of Chemistry in 1970, was promoted to Professor in 1977, and joined the Polymer Science Program at Akron in 1983. Professor Harris now spends 50% of his time at a company he founded - Akron Polymer Systems - that develops many different types of high-performance polymers for commercial applications.



PAST MEETINGS

3RD ANNUAL SECTION PICNIC OF THE NEW ERA

On August 11th, three dozen or so chemists and family members convened at John Bryan State Park to partake in food, drink, Frisbee, lethal lawn darts, soccer, water-gun fights, skinny-balloon sculpting, entomology, and battle-of-the-sexes corn hole.



Why can't different generations ever see eye to eye?



Apparently, Emily Koerner inherited every bit of her father's coordination.



Hilmar tries out a come-over alternative.



Mmmmmmmmm, MEAT!



Everyone thought that our Chair screwed up royally when we were short of hot dog buns but actually the last bag contained this little guy.



We resorted to a good, old-fashioned bribe when pleading, cajoling, and threatening didn't convince Jonathan Mirau to give the picnic a thumbs up.

ChemLuminary Awards: The Dayton Section Gets Screwed, AGAIN!

Prior to the spring ACS meeting in Boston, our Chair, Peter Mirau, received from ACS's Local Section Activities Committee (LSAC) email saying that the Dayton Section was nominated for a ChemLuminary award. LSAC requested that we prepare a poster on our public outreach activities to display at the reception/poster session prior to the awards. We did so, at a cost of \$140. LSAC also requested that we supply them with photos to be used at the awards ceremony. We complied.

When our Councilor went to the reception to put up our poster, he found poster boards headed with section and division names but none said "Dayton Section." When he inquired about this, he was told that the Dayton Section had not been nominated for a ChemLuminary Award.

This type of treatment is not unprecedented. The year was 1997. The Section's Public Relations Chair received two letters from ACS's Department of Media Relations congratulating him on being selected as a recipient of the 1996 Public Relations Award.

Our PR Chair traveled in August on a \$600 budget to a sweltering, gaudy city to receive an award on behalf of his Section. At the award ceremony, he prepared to receive the award. But, apparently, there was a mistake; the Dayton Section did not win but instead received a consolation. Then, to add insult to injury, the presenter – a Past ACS President – got his name and the details of the Dayton Section's PR accomplishments wrong. It is at this moment when our PR Chair remembered that Dayton Section members had been informed through the *Bulletin* of what he realized was a falsity. Subsequently, our Chair wrote a letter to ACS asking for an explanation. We never received a reply.

Revisiting the Dayton Section Rumor Mill

The Section's lawyers advised us to clarify the rumors listed in the last edition of the *Bulletin*.

1. *In the privacy of his own home, Hilmar enjoys wearing a monocle.* Hilmar has not denied this but there's no proof. **False.**
2. *During high school, Mrs. Koerner sang lead in a heavy metal band called MerriDeath.* The key word here is "sang." As one former group member put it, "I wouldn't call that singing." **False.**
3. *Joy knew that Jeff was "The One" when she felt the hair on the back of her knees stand out on end.* Jeff may be "The One" but only Patty and ?? Bouvier have hair on the back of their knees. **False**
4. *Steve's 7th-grade science-fair project was "How to Electrocute Bees with a Rewired Smoke Alarm."* Smoke alarms in 1969? We were happy when our pajamas didn't burst into flames. **False.**
5. *Rachel inherited her wide hips from Grandma J.* Rachel believes this to be true but it turns out that she's adopted. **False.** Sorry, Rachel!
6. *During her Goth phase, Kristi used to dot the i's in her name with Elven Stars.* **False** but change "Goth" to "Grateful Dead" and "Elven Stars" to "skulls" and it's **True!**
7. *Rajiv thinks that ASC (as in "The ASC of Dayton") stands for "Altered State of Consciousness."* **True.** Smoke it if you've got it, Rajiv.
8. *John cheats at "Su Doku for Chemists."* A typo made some readers think that this was aimed at John Fortman but it's Jon Slagle who's the cheater. **True.**
9. *Peter has dainty ankles.* **True.**
10. *Larry has a recurring nightmare wherein he's on death row and, despite his pleas for a last meal of Chicken Turino, the guards bring him vegetable lasagna, and laugh as they serve all the other inmates the chicken.* Larry has refused to comment but he's also not explained why he sometimes wakes up in the middle of the night in tears. Let's give him the benefit of the doubt. **False.**
11. *Venkat fancies himself as "the straw that stirs the drink."* **True.** (The Editor suggests that Venkat observe how the rest of the Yankees responded to Reggie Jackson in *The Bronx is Burning*.)

Report from Council

Sadly, the Fall Meeting in Boston took the worst aspect of the Spring meeting in Chicago and made it its own. In Chicago, the McCormick Center is far from downtown with nothing much surrounding it but a hotel or two. One has to wait for a bus (the service reportedly costs the ASC on the order of a million bucks) and endure a ride through city traffic. In Boston, instead of being able to walk a block or two to the Hynes Convention Center as in years past, attendees had to take buses to the new Boston Convention & Exhibition Center near the waterfront. In his attempt to explain getting lost, my first bus driver – a Boston native – said that “there was nothing here when I was a kid.” Even now, there’s not too much there, save for a hotel and the convention center. Apparently, the meeting experience of ACS members takes a back seat to exhibition space; at the previous Boston ACS meeting, there was a waiting list for exhibitors, which translates to lost revenue for the ACS (I wonder if this was more or less than ACS had to pay for bus service). Fortunately, Council met at a Back Bay hotel (while the waterfront is nice, this councilor prefers an urban setting).

On a related note, however, it was reported at Council that the number of complaints (and the degree of their zealotry) persuaded the Committee on Meetings and Expositions to perform a survey, the results of which persuaded them to change the location of the 242nd ACS meeting from Chicago to Denver. Needless to say, the delegation from Chicago didn’t like this decision one bit. Of course, none of these tidbits found their way into the “official” talking points provided to me by ACS. On a brighter note, though, Councilors did have tables and chairs for breakfast, unlike in meetings past at which councilors had to juggle coffee in one hand, a small plate of pastry in the other, and had to figure out how to eat the pastry without mimicking a cow at a trough. In addition, Madeleine Jacobs (Executive Director & CEO) even came over to my table, although she wanted to talk to one of the other councilors, not to me. I am unpopular.

I’ll post on the section’s web page (DaytonACS.org) the white-bread report from Council provided by ACS. I’ve added in italics my personal actions (like votes) and snide remarks, where appropriate. The biggest issue coming down the pike, IMHO, is the amendment on Membership Categories and Requirements, presented for consideration only but which will be up for vote at the next council meeting. Essentially, student affiliates will become student members. They’ll be able to vote in elections and even hold office in their local section but may not hold national offices like councilor or alternate councilor. Student members will have reduced dues (as Student Affiliate Members now have) and will have electronic access to *C&EN*, unless they want to pay extra for the print edition. In effect, the Associate Member category will be supplanted by the Student Member category. Our section will have to revise our By-laws accordingly.

ACS Comment on Award of 2007 Nobel Prize in Chemistry

WASHINGTON, Oct. 10, 2007 —Catherine T. (“Katie”) Hunt, Ph.D., president of the American Chemical Society, the world’s largest scientific society, comments on today’s award of the Nobel Prize in Chemistry to Gerhard Ertl. Surface science, the topic of the prize, was fundamental to Hunt’s initial scientific research.

“Alles Gute zum Geburtstag Gerhard! What a fabulous birthday present for a spectacular scientist. I am delighted that the prize recognizes a field of chemistry that often receives little public attention, and yet has transformed lives in so many ways. Research in surface chemistry already has underpinned innovations ranging from air pollution control technology to modern electronics products. In the future, this research will help us tap new sources of renewable fuels, for instance, and produce smaller, more powerful electronics products. On behalf of the ACS’s 160,000 members I congratulate the Royal Swedish Academy of Sciences for recognizing surface chemistry and Gerhard Ertl.”

The Sept. 23, 2004 issue of ACS’s *Journal of Physical Chemistry B*, carried articles honoring Gerhard Ertl on his retirement. (Reprinted in part from the ACS website.)

— Michael Woods

AAT-3 – Chemistry Crossword for Anglophiles: Answer from last edition

B	A	R	I	U	M		C	H	E	L	A	T	E	S
	R		N		E		H		E		R			T
I	O	N	M	E	T	E	R		H	A	L	I	D	E
	M		O		A		O			D		O		T
T	A	N	T	A	L	U	M		M	I	N	X	E	S
	T		I		L		A			N		I		O
	I		O	M	I	T	T	I	N	G		D		N
S	C	A	N		S		O		E		S	E	E	S
P		N		W	E	I	G	H	O	U	T		X	
E		A		H			R		L		R		T	
C	A	L	V	E	S		A	T	O	M	I	S	E	D
T		Y		T			P		G		P		R	
R	E	S	I	T	S		H	A	I	R	P	I	N	S
A		T		E			I		S		E		A	
L	Y	S	E	R	G	I	C		M	O	D	U	L	E

Science for Kids: Teaching Old Discs New Tricks: A New Spin on CDs and DVDs — as High-Hech Lab Tools

The next time you rip a CD onto that shiny new iPod or cozy up with a DVD movie, give this some thought: Scientists have found a surprising new job for compact discs and players. Those silvery wafers of plastic may be taking a spin in a laboratory near you!

Scientists in Spain found a way to use CDs, DVDs and disc players as laboratory tools. Some of them may take a spin one day testing blood or urine to make sure people stay healthy. In the future, others might identify mysterious substances found at crime scenes, and help find the criminal.

Dr. Angel Maquieira led the research team. These scientists used a cheap, portable compact disc player and CDs to build an early model of a compact disc lab unit. Dr. Maquieira coated an ordinary CD with special chemicals and three pesticides used to kill harmful insects. He put that CD into a Discman and pushed “play.” The laser light in the player that normally reads a CD could detect differences between each pesticide. When the information from the CD player was sent to a computer, it correctly identified each pesticide.

The scientists believe that lots of other chemicals can be identified in the same way with these cheap, simple recycled tools. And since CDs, DVDs and their players are so light and compact, they could be taken anywhere without much fuss. It looks like you can teach an old disc new tricks! The new study will appear in the American Chemical Society’s journal *Analytical Chemistry*. (Reprinted from the ACS website.)

— Adam Dylewski

2007 Dayton Section Elections: Candidate Biographies & Statements

Office: Chair-Elect

Candidate: Dr. Alan Todd Yeates

Position Title and Place of Employment

Research Chemist, Materials & Manufacturing Directorate, Air Force Research Lab, WPAFB

Education:

B. S. Chemistry, Oregon State University, 1976

Ph.D. Physical Chemistry, University of Washington, 1986

Professional Society Affiliations:

ACS member since 1976.

Statement:

I've been an ACS member for longer than I care to think, and they recently sent me a pen. So I think it's time for me to give back to the society.



Office: Secretary

Candidate: Mr. Jonathan Slagle

Position Title and Place of Employment:

Research Scientist – AT&T Government Solutions Inc., Air Force Research Lab, Wright-Patterson AFB

Education:

B.S. Chemistry, Wright State University, June 2003

Professional Society Affiliations:

Dayton Section ACS Webmaster, 2004-2006

ACS Member since 2003

Statement:

I look forward to my continued service to the Dayton local ACS.



Office: Alternate Councilor

Candidate: Dr. Rachel Jakubiak

Position Title and Place of Employment

Education:

Ph.D. in Chemistry, University of Rochester, October 2000

M.S. in Chemistry, University of Rochester, June 1997

B.S. in Chemistry, The University of Michigan, June 1995

Professional Society Affiliations:

Secretary, Dayton Section ACS, 2005-6

Alternate Councilor, Dayton Section, 2007

Statement:

It would be a privilege to serve as the Alternate Councilor of the Dayton Section of the ACS. As Alternate Councilor I shall work diligently to support activities that instill in the general population interest and enthusiasm for chemistry and science.

2007 Dayton Section Elections: Candidate Biographies & Statements

Office: Councilor

Candidate: Steve Trohalaki

Position Title & Place of Employment:

Computational Chemist, Visiting Scientist, Air Force Research Laboratory, since 1991

Adjunct Professor, Department of Chemistry, Wright State University, 1999-2000

Education:

B.S., Chemistry, University at Albany, State University of New York, 1979

Ph.D., Physical Chemistry, University at Albany, State University of New York, 1987

Postdoctoral Research Assistant, Dept. of Chemistry, University of Cincinnati, 1987-88

Postdoctoral Research Associate, Dept. of Chemical Engineering, Syracuse University, 1989-90

Professional Society Affiliations:

Member of the American Chemical Society since 1981

Member of the COMP, INOR, and PROF Divisions

Attended nearly all National Meetings since 1990 (and a couple before 1990)

Veteran of over a dozen National and Regional Employment Clearinghouses/ChemJobs

Dayton Section Offices, Committees, and Other Activities:

- Alternate Councilor and ACS Delegate to the Affiliate Societies Council of Dayton, 1999-2004
- Federal and State Government Contact, 1997-2000
- National Chemistry Week Coordinator, 1997-2001
- Government Relations Chair, 1995
- Public Relations Chair, 1995-2002
- Bylaws Committee, 1999-2000
- Bulletin Editor, 2004-present
- 1996 Central Regional Meeting
 - Printing & Publicity Chair
 - Younger Chemist Committee Organizer
 - Employment Clearinghouse Contact

Member of the Materials Research Society intermittently since 1991

Special Contributor to the *MRS Bulletin* since 2002

Statement

The first agenda item at Council Meetings is a resolution to honor deceased councilors. So, you may ask, now that I am certain that at least someone will take notice when I bite the big one, why do I want to continue as Councilor for the Dayton Section? First of all, as in all my previous services to the Section, no one else wants to do it. More importantly, however, the ACS is currently undergoing considerable change, albeit slowly. For example, college students may soon be eligible for ACS membership, which will require substantial changes in ACS's bylaws. With your vote – or without it (see above) – I will continue my work on the Council Committee on Constitution & Bylaws and contribute to transforming ACS into a more inclusive and more member-friendly Society. In addition, I'll continue to keep you informed on Council activities, whether you like it or not.

